



## Descriptions of Nine Final Sites Added to the National Priorities List in July 2004

Office of Superfund  
Remediation and Technology Innovation  
State, Site, and Tribal Identification Center

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This document consists of descriptions of the nine final sites added to the National Priorities List (NPL) in July 2004. The size of the site is generally indicated, based on information available at the time the site was scored using the Hazard Ranking System (HRS). The size may change as additional information is gathered on the sources and extent of contamination. Sites are grouped according to proposed or final status, and are arranged alphabetically by site name within those groups.

### CLEANING UP UNDER SUPERFUND

The Superfund program is managed by the U.S. Environmental Protection Agency (EPA). It is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), enacted on December 11, 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA), enacted on October 17, 1986. In October 1990, SARA was extended to September 30, 1994. An appropriation by Congress for Fiscal Year 1995 authorized Superfund to continue to operate. The Hazardous Substance Response Trust Fund set up by CERCLA as amended pays the costs not assumed by responsible parties for cleaning up hazardous waste sites or emergencies that threaten public health, welfare, or the environment; Superfund also pays for overseeing responsible parties conducting cleanup.

Two types of responses may be taken when a hazardous substance is released, or threatens to be released, into the environment:

- **Removal actions – emergency-type responses to imminent threats.** SARA limits these actions to 1 year and/or \$2 million, with a waiver possible if the actions are consistent with remedial responses. Removal actions can be undertaken by the private parties responsible for the releases or by the Federal government using the Superfund.

- **Remedial responses – actions intended to provide permanent solutions at uncontrolled hazardous waste sites.** Remedial responses are generally longer-term and more expensive than removals. A Superfund-financed remedial response can be taken only if a site is on the NPL. EPA published the first NPL in September 1983. The list must be updated at least annually.

EPA's goals for the Superfund program are to:

- Ensure that polluters pay to clean up the problems they created; and
- Work first on the worst problems at the worst sites, by making sites safe, making sites clean, and bringing new technology to bear on the problem.

### REMEDIAL RESPONSES

The money for conducting a remedial response at a hazardous waste site and a removal action, as well, can come from several sources:

- The individuals or companies responsible for the problems can clean up voluntarily with EPA or State supervision, or they can be forced to clean up by Federal or State legal action.
- A State or local government can choose to assume the responsibility to clean up without Federal dollars.

- Superfund can pay for the cleanup, then seek to recover the costs from the responsible party or parties.

A remedial response, as defined by the National Oil and Hazardous Substances Pollution Contingency Plan, the Federal regulation by which Superfund is implemented, is an orderly process that generally involves the following steps:

- Take any measures needed to stabilize conditions, which might involve, for example, fencing the site or removing above-ground drums or bulk tanks.
- Undertake initial planning activities to scope out a strategy for collecting information and analyzing alternative cleanup approaches.
- Conduct a remedial investigation to characterize the type and extent of contamination at the site and to assess the risks posed by that contamination.
- Conduct a feasibility study to analyze various cleanup alternatives. The feasibility study is often conducted concurrently with the remedial investigation as one project. Typically, the two together take from 18 to 24 months to complete and cost approximately \$1.3 million.
- Select the cleanup alternative that:
  - Protects human health and the environment;
  - Complies with Federal and State requirements that are applicable or relevant and appropriate;
  - Uses permanent solutions and alternative treatment technologies or resource recovery technology to the maximum extent practicable;
  - Considers views of the State and public; and
  - Is "cost effective" -- that is, affords results proportional to the costs of the remedy.
- Design the remedy. Typically, the design phase takes 6 to 12 months to complete and costs approximately \$1.5 million.
- Implement the remedy, which might involve, for example, constructing facilities to treat ground water or removing contaminants to a safe disposal area away from the site.

EPA expects the implementation (remedial action) phase to average out at about \$25 million per site (plus any costs to operate and maintain the action), and some remedial actions may take several years to complete.

The State government can participate in a remedial response under Superfund in one of two ways:

- The State can take the lead role under a cooperative agreement, which is much like a grant in that Federal dollars are transferred to the State. The State then develops a workplan, schedule, and budget, contracts for any services it needs, and is responsible for making sure that all the conditions in the cooperative agreement are met. In contrast to a grant, EPA continues to be substantially involved and monitors the State's progress throughout the project.
- EPA can take the lead under a Superfund State Contract, with the State's role outlined. EPA, generally using contractor support, manages work early in the planning process. In the later design and implementation phases, contractors do the work under the supervision of the U.S. Army Corps of Engineers. Under both arrangements, the State must share in the cost of the implementation phase of cleanup.

## **National Priorities List Final Rule #36 Narrative Summaries**

### **Site Name and Location**

Annapolis Lead Mine, Annapolis, Missouri

Cidra Ground Water Contamination, Cidra, Puerto Rico

Diaz Chemical Corporation, Holley, New York

Grants Chlorinated Solvents Plume, Grants, New Mexico

Jacobsville Neighborhood Soil Contamination, Evansville, Indiana

Peninsula Boulevard Ground Water Plume, Hewlett, New York

Picayune Wood Treating, Picayune, Mississippi

Pike Hill Copper Mine, Corinth, Vermont

Ryeland Road Arsenic, Heidelberg Township, Pennsylvania

**ANNAPOLIS LEAD MINE**  
**Annapolis, Missouri**

**Conditions at Proposal (March 8, 2004):** The Annapolis Lead Mine (ALM) is an inactive lead mine located approximately 1 mile east and 3/8 mile north of Annapolis, Iron County, Missouri. The total area of the former mine facility is approximately 50 acres. Lead-bearing ore was mined from ALM sporadically from approximately 1920 through 1940. According to production figures for a portion of the mine's operational history, over 1 million tons of mining wastes were generated. The mining wastes, composed of overburden and milling residue, contain heavy metals. The primary metals of concern are lead, cadmium, zinc, and arsenic. The site is being proposed to the NPL because elevated levels of heavy metals, particularly lead, have been found throughout the site. In addition, elevated concentrations of site-related hazardous substances have been detected in surface water bodies located downstream from the site and pose a threat to recreational fisheries and wetlands in the area.

The former mining facility is composed of derelict buildings used during the mining operation, most of which only have foundations remaining. One structure, however, was used as a single family residence. The dominant feature on the site is a chat/tailings pile that occupies approximately 10 acres in the southern portion of the former mining facility. The material in the pile is highly erodible, which has resulted in steep-sided features with an outwash area that fans westward to Sutton Branch Creek. The property is divided among several landowners.

Previous sampling activities at the ALM site have included efforts by the Missouri Department of Natural Resources, an EPA-lead Site Investigation (SI) and Expanded Site Investigation (ESI), and an emergency response (resulting from the occurrence of high blood lead levels in children who have since been relocated from the site). The analytical results associated with these sampling activities indicated the presence of heavy metals in the on-site ground water, surface water, sediment, and surface soil. Dust and wipe samples were also collected within the on-site residence and were found to have lead concentrations up to 0.625 micrograms per square centimeter (ug/cm<sup>2</sup>) and 1,170 mg/kg, respectively.

Four lead-contaminated source areas were delineated for removal assessment purposes: the heavily eroded chat/tailings waste pile, the outwash area of the chat/tailings waste pile, the former mining operations area, and the mill slime pond. EPA analytical results have identified heavy metals at all four delineated source areas. Elevated levels of metals, particularly lead, were found throughout the site, with the highest concentration at 20,000 mg/kg in surface soils adjacent to the onsite residence. Samples collected at the chat/tailings pile during the EPA SI in April 1996 revealed lead and cadmium concentrations as high as 2,570 mg/kg and 4.67 mg/kg, respectively. Elevated levels of arsenic, cadmium, lead, and zinc were also found during the ESI sampling activity in the surface waters of Sutton Branch Creek and Big Creek. Lead was found as high as 2,600 mg/kg in sediment samples at the chat/tailings pile outfall and as high as 1,700 mg/kg at the confluence of Sutton Branch Creek and Big Creek (designated wetland area), located about 0.75 miles downstream of the site.

Big Creek is a known fishery, and wetlands have been identified at the confluence of Sutton Branch and Big Creek. Soil contamination poses a threat to human health because of the lack of vegetation on exposed contamination, the presence of residents on the site, a lack of access restriction, and use of the site for recreation. Currently, a minimal threat exists for site ground water. None of the domestic wells sampled within a 1-mile radius had concentrations exceeding the designated Maximum Contaminant Levels (MCLs).

**Status (July 2004):** A removal action was initiated at the Annapolis Lead Mine site. The removal action will stabilize and cover the abandoned tailings pile which is migrating into Big Creek via Sutton Branch. At the current time, two temporary settling basins have been constructed between the tailings pile and Sutton Branch to establish a barrier between the tailings and Sutton Branch.

*[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]*



## CIDRA GROUND WATER CONTAMINATION

## Cidra, Puerto Rico

**Conditions at Proposal (March 8, 2004):** The Cidra Ground Water Contamination site consists of a ground water plume with no identified sources of contamination. The Puerto Rico Department of Health (PRDOH) ordered the following four public supply wells in Cidra to be closed because of contamination by tetrachloroethylene (PCE): Cidra Well 4 (Calle Padilla Final) in March 1996; Cidra Well 8 (Frente Cementerio) in October 1996; Cidra Well 3 (Planta Alcantarillado) in February 1999; and Cidra Well 6 (Calle Baldorioty) in August 2000. Other chlorinated volatile organic compounds (VOCs), including 1,1-dichloroethylene (1,1-DCE) and trichloroethylene (TCE), were also detected in the wells before they were closed. The Cidra Ground Water Contamination site is located in Cidra, Puerto Rico.

In June 2002, the U.S. Environmental Protection Agency (EPA) Region 2 Site Assessment Team (SAT) began an Expanded Site Inspection (ESI) of the Cidra Ground Water Contamination site. Confirmatory ground water samples were collected from the closed wells and 20 other active and inactive wells in Cidra. PCE was detected in the closed wells at concentrations ranging from 0.64 to 12 micrograms per liter (ug/L), and was also detected in two nearby industrial supply wells at the Zenith Laboratories site at concentrations as high as 4.1 ug/L. Related chlorinated solvents, including 1,1-DCE; 1,1-dichloroethane (1,1-DCA); cis-1,2-dichloroethylene (cis-1,2-DCE); carbon tetrachloride; and TCE, were also detected in ground water samples collected from the closed wells and Zenith Laboratories industrial supply wells.

The aquifer of concern in Cidra is in the Pre-Robles Volcanic Rock that underlies the area. Existing well logs and the recent EPA subsurface investigations indicate that 9 to 120 feet of clay or silty clay and 10 to 30 feet of decomposed rock overlie the bedrock throughout the municipality of Cidra. The existing well logs indicate that water-bearing zones in the bedrock range from 40 to 360 feet below ground surface in a confined aquifer. Ground-water flows toward and discharges to Cidra Lake. The closed and active wells are all finished in the bedrock aquifer at total depths ranging from 110 to 705 feet below ground surface, with surface casing lengths ranging from 8 to 224 feet.

In January and February 2003, Region 2 SAT continued the ESI by investigating 12 industrial sites in Cidra as potential sources of contamination to the ground water plume using field screening technology and confirmatory analyses through soil samples. Subsurface soil samples were completed at the 12 industrial sites plus two background sites. Soil cores were retrieved at five-foot intervals and were screened for the presence of chlorinated VOCs. The ESI, including research which shows whether a particular facility used chlorinated solvents in their processes, identified five potential sources of contamination.

Contamination is not documented from surface soils through the intervening soil layers to ground water at any of the possible sources. These results are insufficient to conclusively determine the source of contamination of the local drinking water supply wells.

**Status (July 2004):** EPA is considering various alternatives for this site.

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**DIAZ CHEMICAL CORPORATION**  
**Holley, New York**

**Conditions at Proposal (March 8, 2004):** The Diaz Chemical Corporation ("Diaz") is a former chemical manufacturing facility with a long history of releases into a neighboring residential community. An air release from a non-permitted emission point in January 2002 left solidified drops containing 2-chloro-6-fluorophenol (CFP) on residential and public property, including houses, cars and a swing set, as far as 0.31 mile east-northeast of the facility. The release produced odors reported as far as 12 miles away. In addition to CFP, other phenolic compounds and toluene were present in the released chemical mixture. Residential neighbors complained of odors and respiratory and other ailments associated with the release. Direct observations document this observed release of a CERCLA hazardous substance to the air pathway.

The 5.5-acre, wedge-shaped Diaz facility is located at 40 Jackson Street in the Village of Holley, Orleans County, New York, approximately 25 miles west of Rochester. Before its use by Diaz, the property was used for food processing and cider vinegar production from 1890 until 1974. From 1974 until June 2003, Diaz manufactured and stored intermediate organic chemicals for the pharmaceutical, agricultural, photographic, color and dye, and personal care products industries. The company specialized in the production of halogenated aromatic compounds. When Diaz filed for bankruptcy and abandoned the facility in June 2003, the company left behind a multitude of chemicals in drums and tanks.

Before the January 2002 air release, Diaz had a long history of releases to the environment from its facility. A nitric and sulfuric acid release in January 1977 caused eye and skin irritation in affected residents. Other compounds that were spilled to the ground or released to the air between 1977 and 1999 included the herbicides lactofen and trifluralin, nitrogen, potassium hydroxide, methanol, tetraethyl ammonium bromide, bromoacetophenone, dimethyl sulfoxide gas, ethyl chloropropane, bromine, hexane, process water and sludge, triethylamine, acetic anhydride, acetic acid, para-chlorobenzotrifluoride (PCBTF), ferric chloride anhydrous, dichlorobenzotrifluoride, dibromobenzene, and 3,4-dimethoxytoluene.

On January 5, 2002, Diaz employees overheated a reactor vessel, its safety valve ruptured and released 75 gallons of chemical mixture through a non-permitted emission point. The release consisted of CFP, related phenolic compounds, and toluene. The splash zone for the release extended northeast of the facility into the neighboring residential community. As a result of the release, Diaz partially funded the relocation of 15 to 20 families from their homes near the plant to hotels, motels, and apartments. CFP was detected in the urine of some of those displaced residents. Subsequent EPA inspections in March, June, and August 2002 revealed that Diaz was operating without appropriate safeguards to protect its employees and the surrounding residential community.

From 1994 to 1999, Diaz conducted a six-phase Remedial Investigation (RI) under the guidance of New York State Department of Environmental Conservation (NYSDEC). The RI results revealed soils and ground water on the property and nearby contaminated with volatile organic compounds (VOC) and semivolatile organic compounds (SVOC). Contaminants detected in soil and ground water include 1,2-dichloroethane (a.k.a. ethylene dichloride, or EDC); vinyl chloride; 1,2-dibromoethane (EDB); benzene; xylene; ethylbenzene; and a number of brominated chemical intermediates. EPA is maintaining a ground water treatment system on site designed to address migration of subsurface contamination. The nearest municipal drinking water supply well is located 0.66 mile south of the site.

**Status (July 2004):** To date, EPA has removed 2400 drums and 40,000 gallons of bulk chemicals from the site. Residents dislocated from their homes following the January 2002 chemical release continue to receive relocation assistance from EPA.

*[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]*



## GRANTS CHLORINATED SOLVENTS PLUME

## Grants, New Mexico

**Conditions at Proposal (March 8, 2004):** The Grants Chlorinated Solvents Plume site is a ground water plume contaminated with chlorinated solvents in the vicinity of First and Jefferson Street in the city of Grants, Cibola County, New Mexico. The site is located in a primarily mixed commercial/residential area. The area of the ground water plume is defined by ground water samples collected from monitoring wells and direct push sampling points in the upper shallow alluvial aquifer. The known lateral extent of the ground water plume is approximately 1,500 feet long by 600 feet wide; the vertical extent of the ground water plume has not yet been defined.

The New Mexico Environment Department (NMED) Underground Storage Tank Bureau discovered the ground water plume in August of 1993, during an environmental investigation associated with underground gasoline storage tanks. Ground water sampling detected the occurrence of perchloroethene (PCE), trichloroethene (TCE), and dichloroethene (DCE) above Federal drinking water standards in three monitoring wells. Subsequent ground water sampling in the spring of 1994 identified these same chlorinated solvents in three additional monitoring wells installed at the site.

Ground water and soils at the site are contaminated with volatile chemicals that include PCE, TCE, DCE, and vinyl chloride (VC). High concentrations of these volatile compounds were detected in shallow ground water at the site, just four to six feet below the ground surface. Shallow ground water collected from monitoring wells in a residential area have detected PCE as high as 26,000 ug/L. Concentrations of TCE and DCE in shallow ground water have been detected at 6,500 ug/L and 2,400 ug/L, respectively. Several inorganic CERCLA hazardous substances were also observed at significant levels in monitoring wells above background concentrations in ground water at the site. These include arsenic, beryllium, cadmium, chromium, lead, nickel, and zinc.

Ground water sampling has indicated that a total of 15 monitoring wells have been impacted by chlorinated solvents. These wells are completed in a shallow alluvial aquifer. Most of the monitoring wells were completed to less than 15 feet below ground surface. The deepest monitoring wells impacted by chlorinated solvents at the site was completed at a depth of 47 feet.

A source for the release of chlorinated solvents to ground water could not be positively identified. Investigations by NMED have identified several potential source areas, including primarily a current dry cleaning facility, a former dry cleaning facility, and a former telephone company maintenance facility.

The majority of the population within four miles of the site relies on municipal water systems. Five municipal wells are located within a four-mile radius of the site. Two of the municipal wells are owned by the City of Grants, one is owned by the Village of Milan, and two are owned by the Town of San Rafael. All of these wells produce water from the San Andres Limestone and Glorieta Sandstone Aquifer, which is considered a karst aquifer. These wells have not been impacted by chlorinated solvents from the site.

Seven soil sampling locations positively identified soils contaminated with chlorinated solvents at less than two feet below ground surface. The area of observed contaminated soil covers approximately 11,000 square feet. At least seven residents live within 200 feet of the area of observed contamination.

**Status (July 2004):** EPA is considering various alternatives for this site. To date, two rounds of indoor air sampling have been conducted. Data from indoor air indicates migration of volatile organic substances from the subsurface. EPA is evaluating the data and conducting a risk assessment to identify any potential health impacts from site contaminants.

*[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]*





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## NATIONAL PRIORITIES LIST (NPL)

July 2004

OSWER/OSRTI

State, Tribal, and Site Identification Branch

Washington, DC 20460

### JACOBSVILLE NEIGHBORHOOD SOIL CONTAMINATION Evansville, Indiana

**Current Conditions (May 25, 2004):** The Jacobsville Neighborhood Soil Contamination (JNSC) site, in Evansville, Indiana, is in a predominantly residential area including a hospital, a school, and several small businesses. The contamination was discovered during an analysis of residential soils collected as part of a reassessment of the Evansville Plating Works (EPW), which revealed elevated levels of lead. The EPW site is an abandoned electroplating and metal refinishing facility. In 1990, the U.S. EPA conducted a removal activity at the facility to remove plating wastes. EPA's contractor conducted a Screening Site Inspection (SSI) under CERCLA after the removal activity. The SSI concluded that no further action was needed and the site was assigned a No Further Remedial Action Planned (NFRAP) status.

In summer and fall of 2000, IDEM (Indiana Department of Environmental Management) staff conducted a reassessment of the EPW site because no offsite samples were collected as part of the SSI. The NFRAP status was based upon the on-site samples collected as part of the SSI and the on-site removal activities. Residential soil samples were collected as part of the reassessment. Analysis of the soil samples collected in 2000 revealed elevated levels of lead. Lead levels in the residential soils were found to be as high as 6,150 mg/kg.

In the winter and spring of 2001, IDEM staff conducted a research project in Evansville, Indiana, at the State Archive Library in Indianapolis, Indiana, and IDEM's air records. The research was conducted to determine if other facilities in the vicinity of the EPW could have contributed to the elevated levels of lead found in residential soils. A review of all of the records identified four former facilities that may have contributed to the lead problem. The four facilities are as follows: Blount Plow Works, Advance Stove Works, Newton-Kelsay, and Sharpes Shot Works.

Blount Plow Works operated from the 1880s to the 1940s as a manufacturer of horse-driven plows. The facility operated a foundry. A Buehler's IGA now occupies the site. Advance Stove Works, which operated from the turn of the century to about the 1950s, was a manufacturer of stoves. This site also operated a foundry. The site is now operated by the Benthall Brothers. Newton-Kelsay, which operated from the turn of the century to the 1950s, was a manufacturer of hames. The site is now occupied by a McDonald's Restaurant. Sharpes Shot Works operated from 1878 to an unknown date, and manufactured lead shot for guns. The site is now owned by Deaconess Hospital. It is believed that soil from the residential properties became contaminated through airborne emissions during regular operations of these facilities.

From June 4, 2001, through June 8, 2001, IDEM staff conducted an Integrated Preliminary Assessment and Site Inspection (PA/SI) at the JNSC site. The JNSC site encompasses a study area that includes residential properties, the four former facilities listed above and the EPW site. The 250 acre area includes approximately 45 city blocks and is bounded by Edgar Street to the west, Lloyd Expressway to the south, Heidelberg Street to the east and Iowa Street to the north.

A total of 189 soil samples were collected from residential properties. The samples were collected within the top 6 inches of soil. The samples were first screened for lead by utilizing a field portable X-Ray Fluorescence (XRF) instrument. The XRF was used to determine which samples had lead concentrations that exceeded 400 mg/kg and were also three times background. This information was needed to determine which samples would be sent for analysis under the CLP (contract laboratory program) for lead concentration verification. Fifty-seven soil samples were sent to the CLP laboratory. The lead concentrations generated by the CLP lab matched well with the XRF screening results.

The lead concentrations and location of each soil sample were plotted on an aerial photograph. Two major areas of contamination were observed. They are named contaminated soil Area A and contaminated soil Area B. The two areas of contamination depict those areas where soil sample results indicate lead concentrations are at least three times the background soil sample concentration. The elevated levels of lead were determined as a potential risk to approximately 500 residents by the soil exposure pathway. The full extent of the contamination has not been fully delineated and the source of the lead-contaminated soils is undetermined. Thus, the source is considered to be the contaminated residential soils. Areas A and B were identified as sources because the lead concentration in soil was at least three times the background concentration.

**Status (July 2004):** EPA is considering various alternatives for this site. This site will be finalized on the NPL.

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**PENINSULA BOULEVARD GROUND WATER PLUME**  
**Hewlett, New York**

**Conditions at Proposal (March 8, 2004):** The Peninsula Boulevard Ground Water Plume site is the location of a ground water plume with no identified sources of contamination. The area under which the ground water plume lies is predominantly residential. The plume was discovered when New York State Department of Environmental Conservation (NYSDEC) conducted a Remedial Investigation (RI) of a dry-cleaning business in Hewlett, New York. The investigation results indicated that almost six parts per million (ppm) of tetrachloroethylene (PCE) are present in shallow ground water; however, the highest concentrations and majority of plume area are not located directly beneath the subject dry-cleaning facility. Therefore, NYSDEC concluded that there is not enough evidence to identify the subject facility as a source of contamination. There are numerous other current and former dry-cleaning facilities in Hewlett.

The NYSDEC RI indicated that ground water flows from the main plume area to the northwest, in the direction of the Long Island Water Corporation (LIWC) Plant 5 Well Field. This cluster of 43 active wells (and numerous inactive wells) is located just northwest of the plume delineated by the RI. The active wells are all screened in the Jameco aquifer (i.e., aquifer of concern, as discussed below) at depths of approximately 150 feet, and contribute to the LIWC system through a common suction unit that prevents access to individual wells. LIWC considers the entire well field to be a single component of its blended system, which has 36 components (i.e., ground water wells) and serves a total population of 230,300 people. The Plant 5 Well Field component serves almost 6,400 of those people.

The people served by the LIWC Plant 5 Well Field are subject to contamination above health-based criteria before treatment, and the contaminants are attributable to the Peninsula Boulevard Ground Water Plume site. Since April 1991, the Plant 5 well water has been treated for PCE contamination by a packed tower aeration system (i.e., air strippers). PCE was detected in every quarterly raw water sample collected at the Plant 5 Well Field from 1999 through 2003, at concentrations ranging from 4.3 ppb to 14.4 ppb. Trichloroethylene (TCE) and cis-1,2-dichloroethylene (cis-1,2-DCE) were also detected in some samples, at individual concentrations ranging from 0.5 ug/L to 3.1 ug/L. The contaminants detected at the LIWC Plant 5 Well Field delineate the leading edge of the contaminated ground water plume.

The Peninsula Boulevard Ground Water Plume site is underlain by the upper glacial (water-table) aquifer, Gardiners Clay, Jameco aquifer, Magothy aquifer, Raritan clay, Lloyd aquifer, and bedrock, in descending order. The aquifer of concern is the Jameco, which consists of the Pleistocene-age Jameco Gravel and is of local importance in the site vicinity. The upper glacial aquifer is no longer used for water supply in the site vicinity. The Gardiners Clay is not a continuous confining layer throughout the two-mile radius of the site, including the Plant 5 Well Field. The upper glacial aquifer directly overlies the Jameco aquifer north of the site, and the two units are both moderately to highly permeable with nearly identical hydraulic conductivities. Based on these considerations, the upper glacial and Jameco aquifers are hydraulically connected in the immediate vicinity of the ground water plume. The Jameco aquifer is also hydraulically connected to the underlying Magothy aquifer, the primary source of public drinking water in Nassau County. The Lloyd aquifer is separated from the Magothy by the intervening Raritan clay, which is thick and laterally extensive. The bedrock surface underlying the Lloyd aquifer forms the base of Long Island's ground-water reservoir.

The results of the NYSDEC investigation also indicated that PCE is present in a stream located in the immediate vicinity of the contaminated ground water plume. The stream flows north from the main plume area and across the grounds of Woodmere Junior High School North, about 100 feet from the building. Access to the stream is restricted by a fence; EPA visually inspected the fence as recently as April 2004.

This information shows that the site is eligible for inclusion on the NPL.

**Status (July 2004):** EPA is considering various alternatives for this site.

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**PICAYUNE WOOD TREATING**  
**Picayune, Mississippi**

**Conditions at Proposal (March 8, 2004):** The Picayune Wood Treating (Picayune) facility is located at 403 Davis Street in Picayune, Pearl River County, Mississippi. Picayune encompasses approximately 29.1 acres. Source areas evaluated at Picayune include an unknown quantity of contaminated soil located throughout the facility, three backfilled surface impoundments on the western portion of the property, and a backfilled former cooling pond in the northern portion of the property. The three surface impoundments on the western portion of the facility property comprise a total area of about 27,000 square feet. The former cooling pond is approximately 5,000 square feet. The surface impoundments are not lined.

The Picayune facility is bounded on the north by a residential, commercial, and industrial area; on the east by a commercial and industrial area; on the south by an abandoned lumber yard, a public park, a daycare center, and residences; and on the west by Southside Elementary School and residences.

Analytical results for on-site surface and subsurface soil samples have indicated the presence of inorganic and organic contaminants including arsenic, chromium, copper, lead, cyanide, benzene, methylisobutylketone, toluene, ethylbenzene, total xylenes, styrene, several polycyclic aromatic hydrocarbons (PAH), and phenols. In addition, several dioxin and furan compounds were identified at elevated concentrations in surface soil, subsurface soil, and sediment samples collected from Picayune.

Ground water contamination is a significant concern at Picayune. Copper and lead are attributable inorganic constituents of concern detected at elevated levels in ground water samples collected from on-site monitoring wells. Site-related organic compounds detected at elevated concentrations in samples collected from on-site monitoring wells include benzene, toluene, ethyl benzene, total xylenes, styrene, isopropyl benzene, and numerous PAHs. An estimated 15,160 persons obtain potable water from wells within a 4-mile radius of Picayune. The nearest drinking water wells are operated by the City of Picayune, within 0.25 miles northeast of Picayune.

Surface water contamination is also a major concern at Picayune. Inorganic contaminants detected at elevated concentrations in sediment samples collected at and downstream of Picayune include arsenic, chromium, copper, lead, and cyanide. Hazardous substances detected at elevated concentrations in sediment samples collected at and downstream of the facility include lead, cyanide, toluene, ethyl benzene, total xylenes, isopropyl benzene, numerous PAHs, and dioxin and furan compounds.

Mill Creek was used for recreational purposes by children in the adjacent public park; however, it has been partially fenced and access is restricted. Mill Creek flows into the Pearl River, which is also used for recreational purposes including fishing and boating. Approximately eight miles of palustrine forested wetlands are located along Mill Creek, downstream of Picayune. Additionally, freshwater wetlands are located on Mill Creek, downstream of Picayune.

**Status (July 2004):** EPA is considering various alternatives for this site.

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**PIKE HILL COPPER MINE  
Corinth, Vermont**

**Conditions at Proposal (March 8, 2004):** The Pike Hill Copper Mine (PHCM) is an abandoned copper mine located off of Pike Hill Road in the Town of Corinth, Orange County, Vermont. PHCM, approximately 1.5 radial miles northeast of the Village of West Corinth, includes a northern and southern mine, and the total mine property encompasses approximately 216 acres. PHCM is located on Pike Hill, a large hill in a rural and forested area along the eastern flank of the Green Mountains. Mine elevations range from approximately 1,640 feet above mean sea level (MSL), at the southern mine, to approximately 1,965 feet above MSL, at the summit of Pike Hill (near the northern mine).

Copper was discovered on Pike Hill sometime before 1847. Initial attempts to mine the ore at Pike Hill occurred in 1847. The northern and southern mines were historically referred to as the Union Copper Mine, and the Corinth (and later the Eureka) Copper Mine, respectively. These mines, eventually designated as the Pike Hill Mines, operated intermittently between 1847 and 1919 when mining operations at the PHCM property ceased. Between 1863 and 1918, approximately 9,085,298 pounds of copper were mined at PHCM.

Approximately 20,000 tons of mill and mine dumps (tailings), averaging 1.6 percent copper, are scattered over the surface of the two mines. At the northern mine are two tailings piles, and at the southern mine are three tailings piles and two mine shafts; several adits are located around the Pike Hill hillside. Each tailings pile consists of brownish-orange colored fine-grained material with rock fragments. Little vegetative growth exists on the surface of the piles.

The mine tailings are rich in metals and sulfides. As water passes over and through the tailings, sulfuric acid is produced and the metals within the tailings are dissolved and mobilized. This results in acid mine drainage which contributes to an elevated load of metals to Pike Hill Brook and the Waits River. In October 1993, the Corinth Fire Department was informed that smoke was emanating from the mine fill at the PHCM site. According to the U.S. Bureau of Mines, the smoldering was due to spontaneous oxidation and combustion of reactive sulfides in the mine fill.

PHCM was previously investigated by State and Federal agencies and private companies. As part of the various studies, one or more samples of mine tailings, soil, surface water, and sediment were collected and analyzed for metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and cyanide. The results indicate metal concentrations that exceed background levels.

A 1997 Vermont Department of Environmental Conservation (VT DEC) study of the macro-invertebrate community and fish populations in surface waters near the site documented a significant impact just downstream of the mine; resulting in a State listing of Pike Hill Brook as an impaired water of the state because of acid mine drainage. The Waits River and the Connecticut River are documented fisheries within the surface water pathway. Sediment and surface water samples of the Waits River show that inorganic contaminants attributable to the mine are documented within the fishery and pose a potential health risk. The Waits River is designated for recreational purposes.

The area is intermittently used by hunters and for other recreational pursuits, and may pose a threat of exposure via contaminated surface soils.

In addition, the Eastern Small-footed bat (*Myotis Leibii*), a State-threatened species, is located within a 0.25 mile radius of the site. The bat's habitat, documented within the surface water pathway, is therefore subject to contamination.

**Status (July 2004):** EPA is considering various alternatives for this site.

*[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]*

**RYELAND ROAD ARSENIC**  
**Heidelberg Township, Pennsylvania**

**Conditions at Proposal (March 8, 2004):** The Ryeland Road Arsenic site is located in Heidelberg Township, Berks County, Pennsylvania. The former facility, which encompasses approximately 7.33 acres, currently comprises several residential properties. Arsenic, copper, and lead contamination was detected in surface soils on these properties, with arsenic levels exceeding health-based benchmarks, and in nearby surface waters. Copper and lead were also found in residential drinking water wells at levels exceeding health-based benchmarks.

From 1920 to 1940, Standard Chemical Works Corporation (SCWC), and subsequently Allegheny Chemical Corporation (ACC), manufactured pesticides, paints, varnishes, and sulfuric acid. The pesticide manufacturing facility was located on the north side of Ryeland Road. After the shutdown and demolition of the pesticide facility, the property was subdivided into four parcels, each containing a residence. The pesticide facility also owned the parcel of land on the south side of Ryeland Road, which has remained undeveloped. As part of the pesticide manufacturing process, arsenic was converted to arsenic acid; by-products included lead arsenate, calcium arsenate, and copper acetoarsenate. Wastes generated during the manufacturing process were reportedly disposed of on both the north and south sides of Ryeland Road.

In December 1983, a resident near the former pesticide facility notified the Pennsylvania Department of Environmental Resources (PADER) of the presence of two piles of a grayish-white material that were found to contain arsenic and lead concentrations of 5,666 and 2,900 milligrams per kilogram (mg/kg), respectively. One pile was located on the residential properties on the north side of Ryeland Road, the location of the former pesticide facility. The second pile was located on the south side of Ryeland Road on the undeveloped parcel previously owned by the pesticide facility. PADER conducted a preliminary assessment and site inspection at the site in 1984 and 1985, respectively. [PADER is now the Pennsylvania Department of Environmental Protection (PADEP).]

The U.S. Environmental Protection Agency (EPA) conducted several removal actions at the site, beginning in 1985, consisting of the removal of arsenic- and lead-contaminated soil from residential properties to a depth of two feet. Arsenic- and lead-contaminated soil was not removed in areas of heavy vegetation, along the railroad right-of-way that borders the residential properties to the north, or below two feet below ground surface. Test trenching at the site has documented that arsenic- and lead-contaminated soil is present to a depth of nine feet below ground surface.

In June 2002, EPA conducted an expanded site inspection of the Ryeland Road Arsenic site. Activities included the collection of ground water, surface water, sediment, and surface soil samples. Samples collected from domestic drinking water wells revealed the presence of copper at concentrations ranging from 40 to 1,300 micrograms per liter (ug/L). Concentrations of lead detected in the domestic drinking well samples ranged from 33 to 190 ug/L, which were greater than three times the background concentration of 4 ug/L. Analytical results for all downstream sediment samples indicated the presence of arsenic at concentrations ranging from 26.3 to 407 mg/kg, exceeding three times the background concentration. One downstream sediment sample contained concentrations of copper and lead exceeding three times the background concentrations.

A drainage ditch that runs through or receives drainage from the areas of contaminated soil empties into a spring-fed creek. The spring-fed creek joins an unnamed tributary to the Tulpehocken Creek, which then joins the Tulpehocken Creek, a State designated scenic river. Both the unnamed tributary and the Tulpehocken Creek are fisheries. Wetlands and several State and Federal threatened or endangered species were identified along these surface waters within 15 miles of the facility.

**Status (July 2004):** EPA is considering various alternatives for this site.

*[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]*

# United States Environmental Protection Agency

For further information, call the Superfund Hotline, toll-free **1-800-424-9346** or **(703) 412-9810** in Washington, DC metropolitan area, or the U.S. EPA Superfund Regional Offices listed below\*.

For publications, contact **EPA Superfund Docket at (202) 566-0276**  
SUPERFUND.DOCKET@EPA.GOV

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Superfund Docket (5305P)  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

Walk-in Address (by Appt.):  
Public Reading Room, Rm B102  
EPA West Building  
1301 Constitution Ave., NW  
Washington, DC 20460

**Office of Superfund Remediation and Technology Innovation**  
**United States Environmental Protection Agency**  
**1235 Jefferson Davis Highway**  
**Arlington, VA 22202**  
**(703) 603-8835**



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